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January 17th, 2006
Reply to Office Action of 11/25/2005

Via Facsimile

Remarks

This amendment is in response to the November 25th, 2005 Final Office Action. Applicant respectfully traverses Examiner's rejections of claims 1-20 in light of the following remarks:

Rejection of claims 1-20 under 35 USC § 112

The Examiner has rejected claims 1-20 due to 2 perceived vagaries. The first is that "semiconductive property" is indefinite, charging that it is unclear if the term represents conductivity or resistivity and in which medium. Applicant will attempt to clarify this term. "Semiconductive" is neither conductive nor resistive, but in between. This is analogous to being asked to define grey in terms of either black or white. Applicant recognizes that this is necessarily a vague term like "shades of grey", so Applicant has defined for the purposes of the present invention that "semiconductive" means between 500-500,000 ohms per square, and notes that this range is not only in the specification but also in the (non-method) independent claims. A specific quote from claims 1 and 12 reads:

"...wherein said thin sheet wedges have a semi-conductive property of between 500-500,000 ohms per square..."

As far as "ohms per square" goes, this is a scientific unit of measurement, and the medium is the object being measured. Here is a useful quote to help explain ohms per square:

Is it ohms per square meter or ohms per square inch? Which is it? Actually, it is none of these, but "ohms per square anything." However, this confusing term that has been used to describe the **Surface Resistivity** (ρ) of a material. Is it here to stay forever? The ESD Association Glossary, ESD-ADV 1.0-1994 (1), describes **Surface Resistivity** in the following way: "For an electric current flowing across a surface, the ratio of DC voltage drop per unit length to the surface current per width. In effect, the surface resistivity is the resistance between two opposite sides

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of a square and is independent of the size of the square or its dimensional units. Surface resistivity is expressed in ohms per square."

For the rest of this article please visit: <http://www.esdjournal.com/techpaper/ohms.htm>

Therefore, Applicant reiterates that "semiconductive property" is measured in ohms per square. It is a standard physical value and is not unclear based on the fact that the range of the "semiconductive property" has been repeatedly specified through the specification and the claims repeat this value in scientific units.

Second, the examiner takes issue that the specification fails to specifically teach how the tensile modulus for the semiconducting sheet wedge is achieved. Applicant disagrees that one of ordinary skill in the art would not know how to produce such a wedge. Applicant has discussed mica and its properties (see para. 16), impregnation of resin (para 20), including amount of resin (para. 24), types of resin (para. 25) combination with glass (para. 22 and fig. 3), as well as providing an illustration of a finished wedge and various other tips through the specification.

Applicant asserts that, based on reading of the specification, one of ordinary skill in the art would be able to reproduce, without undue experimentation, a thin sheet wedge with a tensile modulus between 1-8 million PSI. Any details missing from the specification would not cause undue experimentation to one of ordinary skill in the art.

Additionally, the Examiner has not repeated the rejection of "sheet wedge" but did not recite it as one of the withdrawn rejections. Applicant asks for clarification on this earlier rejection.

Rejection of claims 1, 4-7, 9-12 and 14-20 under §102(b) by Quirk 4,091,139

Applicant appreciates the recital of CFR 1.11(b) and apologizes that the previous Office Action §102 rejection was misinterpreted as a combination of §102 and the elements rejected under §112. There were several reasons for this misinterpretation.

First, the Examiner rejected under §112 multiple elements of the preamble, but apparently at the same time was not considering the preamble to be limiting. Applicant wishes to remove this confusion and submits that the preamble be limiting on the claim

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interpretation. By making this request in the file wrapper, as well as the previous rejections to (and clarification of) the preamble, Applicant believes that sufficient life has been breathed into the preamble for it to be considered. However, applicant has also amended the above claims to include in their body the preamble elements.

Second, the "stiffness" issue stems from the "wedge" as well as the "tensile modulus" §112 rejections. A wedge is inherently stiff. However, to further clarify this, applicant included, in claims 6 and independent claim 12, a specific stiffness range. Specifically:

"...wherein said thin sheet wedges have a tensile modulus of between 1-8 million PSI."

This is a measurement of *stiffness*. Applicant refers to some ordinary practitioners to verify this assertion:

"The tensile modulus is the ratio of stress to elastic strain in tension. A high tensile modulus means that the material is rigid."
<http://www.matweb.com/reference/tensilestrength.asp>

"The stiffness of a thermoplastic is indicated by its tensile modulus."
<http://www.dow.com/sal/design/guide/tensile.htm>

Therefore, Applicant figured that the Examiner wasn't considering the above limitations because of the §112 rejections raised earlier.

In any event, Applicant now turns to the §102 rejection and lists the following claim chart:

| Claim 1 | Quirk '139 |
|-----------------|--|
| Semi-conducting | The mica of Quirk is not semi-conducting. The binding tape (element 18, see for example, col 2 line 48) is the semi conducting feature. In fact, the invention of Quirk is that non-conducting mica is made usable by the addition of a separate element (the binding tape) which is semi-conducting. This reference teaches that mica by itself should not be used for semi-conducting. |

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| thin | The Quirk tape is thin. |
| sheet wedges comprising: | The Quirk tape forms more of a strip than a sheet, but in any event, it is not a wedge, possessing wedge-like properties (as was discussed in the previous response), such as stiffness. |
| a mica matrix, wherein said mica matrix comprises mica flakes; and | The Quirk tape does have a mica matrix, but it is not the semi-conducting element. |
| a conductive resin | It is not clear if Quirk's conductive resin is the same as applicant's. This point is skipped in light of the other arguments against Quirk. |
| impregnated within said mica matrix; | The "conductive resin" of Quirk is impregnated into the porous binding tape, and not the mica matrix. |
| wherein said thin sheet wedges have a semi-conductive property of between 500-500,000 ohms per square. | See "Semi-conducting" above. |

A non definitive claims chart of other limitations includes:

| Other Claim limitations. | Quirk '139 |
|--|--|
| wherein said thin sheet wedges have a tensile modulus of between 1-8 million PSI. | The Quirk tape is <i>flexible</i> , and does not have anything approaching this tensile modulus. |
| wherein said resin comprises approximately 15-40% by weight of said thin sheet wedges. | This limitation is not taught by Quirk. |
| wherein said at least one glass fiber layer is interwoven with said mica matrix. | This limitation is not taught by Quirk. |
| wherein said at least one glass fiber layer is interwoven in a half-lap manner. | This limitation is not taught by Quirk. |

Based on this analysis, it is clear that Quirk falls short of having every claim limitation recited in Applicant's claims. Among the differences, the mica of Quirk is not semi-conducting, it is not impregnated with a conductive resin, and it is not part of a wedge (which is stiff).

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Rejection of claims 2, 3, 8 and 13 under §103(a) by Quirk 4,091,139

The Examiner has apparently given a *new grounds* for rejection in this final office action. Not wanting to put words into the Examiner's mouth, but it appears that the Examiner is using Quirk and "common knowledge" to make this rejection since Applicant cannot find any specifics on this new rejection. Based on this assumption, Applicant traverses this new grounds for rejection and asks the Examiner to provide specific references that combine with Quirk to make these claims obvious. In addition, Applicant reasserts the inapplicability of Quirk as a primary reference as is discussed above.

In view of the above amendments, remarks and term clarifications, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,
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by



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